CRF Problem Report

The Scientific and Technical Information Center (STIC) experienced a problem when processing the following computer readable form (CRF):

Application Serial Number: _US/10/702,676_
Filing Date: _11/6/03_
Date Processed by STIC: _11/18/03_

STIC Contact: **Mark Spencer: Telephone: 703-308-4212; Fax: 703-308-4221**
Effective 12/13/03: **Telephone: 571-272-2510; Fax: 571-273-0221**

Nature of Problem:

The CRF (was):

_____ (circle one) Damaged or Unreadable (for Unreadable, see attached)
_____ Blank (no files on CRF) (see attached)
_____ Empty file (filename present, but no bytes in file) (see attached)
_____ Virus-infected. Virus name: _____ The STIC will not process the CRF.
_____ Not saved in ASCII text
_____ Sequence Listing was embedded in the file. According to Sequence Rules,
     submitted file should only be the Sequence Listing.
_____ Did not contain a Sequence Listing. (see attached sample)
__✓__ Other: _NON-ASCII characters appeared in submitted file. This could indicate a bad disk sector (see attached)_

PLEASE USE THE CHECKER VERSION 4.1 PROGRAM TO REDUCE ERRORS.
SEE BELOW FOR ADDRESS:
     http:/www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**http://www.uspto.gov/ebc/efs/downloads/documents.htm**> , **EFS Submission User Manual - ePAVE**)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry directly to (EFFECTIVE 12/01/2003):**
     U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. **Federal Express, United Parcel Service , or other delivery service to:** U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202 .

Revised 10/08/03

II

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RAW SEQUENCE LISTING          DATE: 11/18/2003
PATENT APPLICATION: US/10/702,676    TIME: 15:26:42

Input Set : A:\pto.ln.txt
Output Set: N:\CRF4\11182003\J702676.raw
```

```
   3 <110> APPLICANT: LU, YI
   4        LI, JING
   6 <120> TITLE OF INVENTION: NUCLEIC ACID ENZYME BIOSENSORS FOR IONS
   8 <130> FILE REFERENCE: 10322/6
> 10 <140> CURRENT APPLICATION NUMBER: US/10/702,676
> 12 <141> CURRENT FILING DATE: 2003-11-06
> 12 <160> NUMBER OF SEQ ID NOS: 84
  14 <170> SOFTWARE: PatentIn Ver. 2.1
```

P. 1

Does Not Comply
Corrected Diskette Ne ded

ORED SEQUENCES

```
1113 <210> SEQ ID NO: 83
1114 <211> LENGTH: 107
1115 <212> TYPE: DNA
1116 <213> ORGANISM: Artificial Sequence
1118 <220> FEATURE:
1119 <223> OTHER INFORMATION: Description of Artificial Sequence: Predicted
1120       secondary structure of the G3 deoxyribozyme
1122 <220> FEATURE:
1123 <221> NAME/KEY: modified_base
1124 <222> LOCATION: (67)
1125 <223> OTHER INFORMATION: variable nucleotide
1127 <220> FEATURE:
1128 <221> NAME/KEY: modified_base
1129 <222> LOCATION: (69)..(74)
1130 <223> OTHER INFORMATION:
1131     var??????????????????????????????????????????????????????????????????????????????????????
1132     ??????????????????????????????????????????????????????quence
1134 <220> FEATURE:
1135 <223> OTHER INFORMATION: Description of Artificial Sequence: Co-DNA
> 1137 <400> SEQUENCE: 84
> 1138 cactatagga agagatggcg acatctcttg acccaagaag
> 1139 gggt??????????????????????????????????????????????????????????????????????????????????????????
> 1140 ???????????????????????????????????????????????????????
> 1142                  ??????????????????
> 1148 23129464/v1
```

/ non-ASCII
   character

VERIFICATION SUMMARY   DATE: 11/18/2003
PATENT APPLICATION: **US/10/702,676**   TIME: 15:26:43

Input Set : **A:\pto.ln.txt**
Output Set: **N:\CRF4\11182003\J702676.raw**

0 M:270 C: Current Application Number differs, Replaced Current Application Number
2 M:271 C: Current Filing Date differs, Replaced Current Filing Date
00 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
36 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
58 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
05 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
41 Repeated in SeqNo=12
137 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:83 differs:84
138 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:40 SEQ:83
139 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
140 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:84
140 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
142 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:84
142 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
148 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:84
54 Repeated in SeqNo=83
148 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:9
148 M:252 E: No. of Seq. differs, <211> LENGTH:Input:107 Found:42 SEQ:83
2 M:203 E: No. of Seq. differs, <160> Number Of Sequences:Input (84) Counted (83)